TECHNICAL EDUCATION REPORT

TO THE

MANPOWER TRAINING PROGRAM

Educational Sector Support Project
University of Nebraska at Omaha
University Town
Peshawar Pakistan

By

Roger L. Miller

June, 1991

CONTENTS

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OF MANPOWER TRAINING PROGRAMS

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PART I
INTRODUCTION

The visit to the Manpower training centers took place at the end of the 1991 spring quarter. This provided the consultant with an opportunity to interview with students, instructors and staff. This report unless other wise noted refers to the Construction Technology portion of the Manpower Training Peshawar only. Interviews and observations were focused on the following areas:

1. To administer evaluations of the technical instructors by the students, and administer a self evaluation of instruction by the instructors. Assistance for both was provided by a worthy interpreter.

2. To conduct interviews with instructors and students, in order to provide a climate survey of the Manpower training centers.

3. Asses the adaptation of the original curriculum and any changes/additions in the curriculum.

4. Explore progress in the publishing of text books and instructional aids and asses needs for the future.

5. To asses the current tool inventory and provide recommendations in these areas.

6. To visit the ATTC educational facility as a prospective addition to the Manpower Training Program.

7. Visit the Quetta Manpower Training facility, interview students, instructors and management.

PART II

EVALUATIONS

Student evaluations of instructors was the first step taken. These evaluations were administered for each of the currently scheduled classes in Peshawar only. Time did not allow the same in Quetta. Fifty one classes and fourteen instructors were evaluated in all.

Evaluations were administered with the help of the interpreter and Eng. Qaseem. Evaluations were interpreted to Dari by Sardar Roshan. A copy of the English and Dari version of the form is included in Appendix-A of this report. However the translation of question number three is not a good representation of the original question. Similar forms were used in the evaluation of instruction in the Business classes by Milan Dady. It should be noted however that changes made in the answer key render the comparison of the two programs impossible.

EVALUATION RESULTS

1. By instructor including work load and point average
2. By subject indicating total hours and point average
3. By class indicating total hours and point average
4. By instructor average, above and below

Listing information by instructor provided an instructional work load for each of the instructors. An overlap in practical work hours was apparent according to the schedule of classes and evaluation results.

Information listed by subject denotes numbers of hours spent in each subject area, representing total hours spent and point averages in each subject area.
Listing information by subject denotes total hours spent in each subject. It is the authors opinion that there is room for consolidation of classes within various subject areas, thus reducing instructional work load.

The data represented in this evaluation is believed to be an accurate comparison of the various areas of instruction. It has been my experience that such evaluations help in self improvement and also help in the formation of outlines for future in-service training.

A proposed evaluation sheet was drafted by the author and in Included in Appendix - C of this report This evaluation contains twenty three brief but descriptive questions and space on the back for comments. The answer key is simple numbered one through five, number one being excellent and number five being poor. For the purpose of an average scores are computed with the numbers having the same assigned value, example 5= 5 points, 4= 4 points etc.

It is strongly suggested that the computer instructor be assigned the task of drafting the final form and tabulation sheet in Dari. This will allow mathematical computations to set up in Lotus 123 or dBbase III, shortening the time needed for tabulating results.

It is recommended that the evaluations be administered in the middle of each cycle. This should display a more accurate account of the instructors effectiveness. At a midpoint students would have been in class long enough to develop opinions, but not long enough to develop animosities toward the instructor. It is believed a midpoint examination would yield more accurate results. It is recommended that this evaluation sheet be used throughout all the MTP facilities, It is regretted that a comparison between Quetta and Peshawar was not practical.

PART III

INTERVIEWS

Formal and informal interviews took place with students and instructors. A worthy interpreter was present during all formal interviews. It is the authors opinion that students as well as instructors spoke freely during these interviews. It should be noted that conflicting schedules did not permit a meeting with Sardar Roshan.

SUGGESTIONS FOR IMPROVEMENT

Proceeding suggestions have been acquired from students of Quieta and Peshawar. In order to facilitate accuracy in reporting, separation as to origin by campus has been made. Questions have not been ranked as to importance, frequency, or are they direct quotes. An attempt has been made in reporting statements in the best possible form of translation.

Quieta Students:

- Holidays, days off should not be counted as required course time.
- Tools for laboratory need to increased in number and quality
- Transportation is a problem, would like to have help in this area.
- Medical assistance, would like MTP to provide.
- Increase laboratory projects.
- Textbooks are needed.
- Program needs to be moved inside Afghanistan.
- Students should receive a full set of tools at the completion of the program.
- Classes should be extended, not enough time to learn everything.
- Drawing tools for home work.
- More time in practical work.
- Some type of practical work experience, on the job training.
- More material for shop projects.
- Proud to be a student at MTP.
- Instructors are doing a good job.
- MTP is the best school in the area.
- Some type of scholarship needs to be developed, so top students may go to the United States.
- Students sell tools at graduation because they break if they are used.

It should be noted that time did not allow a detailed study of student requests in Quetta.

Peshawar Students:

- Would like to see better graduation certificates, other programs have better certificates and honors.
- Insufficiency in materials for laboratory projects.
- Architect scales for use at home.
- Dormitories should be built, could be done as class projects.
- Stipend should be increased, no other suggestions.
- Provided a means of employment after graduation.
- Move the program inside Afghanistan.
- Extend the length of the program.
- More and better tools for the laboratories.
- Provide a means for the best students to go to the United States.
- More time needed, too much to learn too little time.
- More outside laboratory situations. (Cooperative work)
- Top graduates need to go to U.S. for study.
- Need textbooks for classes.
- Some students enrolled for the stipend alone.
- More materials are needed for laboratory projects.
- More handouts for home study.
- Tools are handed out to graduates, but are of poor quality and few.
- Need more power tools for laboratory.

Instructors Quetta:

- Materials are a problem, it may take up to two months to receive after ordering.
- Need assistance with transportation, was promised help when hired but have not yet received help.
- Would like training in the area of instruction.
- I'm happy I have no other suggestions.
- Special orders for furniture and things ordered by office use materials ordered for class projects.
- Have spent monies for Doctor and have not received any from the insurance.
- Construction company needs to be developed using students that have graduated.
- Program needs to be in Afghanistan.
- Need more and better tools
- Some students enter the program for the stipend alone.
- Would like help with English language.
- Need additional classes, Blacksmithing, Auto mechanics.
- Time needs to be extended, students have no where to go when they leave here.

Instructors Peshawar:

- Training time needs to be extended.
- More advanced technology.
- MTP needs to start an agricultural dept.
- Would like to use knowledge to develop theory in the curriculum.
- Need to establish a production shop where students could build things that could be sold.

such as carpentry and masonry, welding combined with plumbing and steel work.

- Need a team to get textbooks finished.
- Need a construction company where students could keep working after graduation.
- A proposal for a production shop was written on 5 Feb. 1991 I have heard nothing.
- Need decent blackboards, would prefer white boards
- Material orders take up to one month.
- Need hardware for practical work.
- Materials and class information for the making of tile.
- Vibrator for concrete.
- Class in ceramic tile.
- Need some cooperative work in Peshawar, but timing does not always work with class work.
- Would like to further my education.
- Level of education in students is much different.
- Advanced students lean toward theory and not practical.
- Other instructors help when asked.
- Two weeks minimum on material orders.
- More room for practical work.
- Larger classrooms, only room for ten students at the most.
- Welders are very low quality, they say more than one setting but only put out one current.
- Graduation certification needs to be better, like foreman.
- Needs templates for students for electrical drawings.
- Ordered two bags of cement and was advised the money was gone.
- Students should have a good set of tools given to them at graduation.
- Advanced class needs to be removed and the whole thing extended nine months, entry is impossible for most.
- Electrical class needs additional training.
- Need dormitories.
- Students need help with transportation.
- Large part of students are not applying themselves, over qualified.
- Mechanical Physics should be added.
- More money paid holidays and Friday
- Graduation certificates, advanced class should be ass. eng.
- Not enough calculators for all.
- No room for material storage.
- Use USAID projects for job placement, and save money.
- Need more catalog and texts as reference.
- Need slide rules.

SUGGESTIONS FOR IMPROVEMENT

A - CURRICULUM DEVELOPMENT

Course outlines or changes in course outlines need to be on file. The need for such course outlines are unquestionable. Consistency in curriculum between facilities must be maintained with the possibility of the addition of a third facility it becomes even more critical.

It was suggested by the faculty that a curriculum team be organized to facilitate curriculum development. Such a committee or a form of it is presently being used in Quetta. Before any class materials are used they are brought before the instructors at a regularly scheduled meeting. From my observations this could assist in the controlled development of the curriculum. Caution should be noted in the careful selection of team members. At this time a vast diversity in the expectations of educational levels exists. Therefore selection of instructors from both extremes could result in a balance. Curriculum could be developed and approved by the board and forwarded to the director for final approval. I would strongly suggest that all curriculum developed should be adopted only after approval of the director. This could become a problem unless one person has solely responsible for the approval for all facilities.

Currently the level of education to be adopted is unclear. Through interviews it was found that the mission of MTP is not clear to the staff. The mission is clearly stated in the introduction of the proposed catalog and reads "To Provide basic office/administrative and vocational skills to Afghans". The following statement was made by Dr. Karyar "We need higher levels of mathematics, a course in calculus is needed". This is not concurrent with the catalog introduction. Therefore a definite need for staff direction in this area is evident.

In conclusion the above stated concerns may largely be due to a lack of directive leadership. Steps must be taken to safeguard this from reoccurrence. In the authors opinion a crue mission statement should be adopted and displayed throughout all MTP facilities. Such a statement would provide a constant reminder of MTP purpose.

B - ENTRANCE EXAMINATIONS

It appears that entrance examinations, although needed, are creating some problems. The competitive nature of the system is yielding some students that are over qualified. This can result in students losing an interest in subject areas.

Examinations could be developed to better fit the needs of MTP. Exams should be designed to represent strengths and weaknesses in various academic areas. The decision of entry should not be based on evaluation scores alone, an interview of students should also

retention, over qualification, and dropout rate could be reduced or alleviated. This is discussed further in this report under Student Retention.

C - STUDENT RETENTION

A chart clearly showing a dropout rate was posted in the Quetta office. This chart conveyed a 25% dropout rate of students in the first three weeks of class, this was also noted at Peshawar but no factual information was available to support it. The vast majority of dropouts occurred in the first two weeks of class. This was attributed to the following reasons.

1. Students did not wish to commit themselves to education.
2. Students became bored, class was too basic for them.
3. Transportation became too much of a problem.
4. Students had family problems and had to leave.

An interview committee designed to screen out overqualified applicants needs to be developed. Such a committee could also provide insight for prospective students in the areas of course level, attendance requirements, etc. Selection of the highest grade level may be self defeating. Implementation of a selection board could decrease the dropout rate.

A waiting list devised from the list of the examinees could alleviate problems with students enrolled for the stipend alone. Students who show no interest in their studies could be monitored by the instructors for the first two weeks of class. At the end of this period they could be administratively withdrawn. A form and procedure should be drafted to facilitate an administrative withdrawal. Possible dropouts could be replaced using the waiting list.

The area of student transportation has also been expressed as a problem.
It has been said that some students have up to four hours a day travel time. Dormitories were suggested by several of the students. It is my understanding that they could be built on top of the current classroom building. Providing dormitories could alleviate some of the travel problems and reduce the amount of the stipend per student. Areas of caution should be noted, It could hamper the expansion of needed training facilities and would not help married students.

D - NEED FOR JOB PLACEMENT PROGRAM

If there are limited job opportunities for students at graduation, there is no reason to graduate more students. This problem exists every where, but is more pronounce due to the refugee problem in Peshawar. It is understood that reentry into Afghanistan has not come as quickly as hoped, although, now is the time to make plans for future graduates.

There appears to be three avenues of thought on this subject: One is for MTP to provide a production shop of sorts so students could

to accommodate graduating students, and third an advisory board be formed to better bridge the gap in communications between employment and education.

There is merit in each of the above suggestions. If it is possible to create such an organization and make it self sufficient, it would alleviate the current problems of placement. Furthermore it could also lead to an extension of training that everyone is inquiring about.

I recommend that this issue be further explored. Eng. Qaseem seemed to be motivated in this area and has had experience in such areas. This so called construction company, production shop, may also fill the gap for cooperative work experience. If the project was run by students who had graduated from both the Business and Construction Technology sections it would serve a dual purpose. With two instructors assigned to the project, it could maintain a good educational level.

In conjunction with the above, an advisory board should be formed from local leaders and representatives of other organizations. It was suggested in Quetta that such a Board should be formed with members from inside Afghanistan resulting in possible placement of students in Afghanistan. I believe a composite of both would be a good blend.

In conclusion there is a definite need for further study into a job placement program. If a program as such were established it may also offset some of the costs. I believe this would be a step forward in the development of a self-sufficient program.

E - TRACKING OF STUDENTS PROGRESS

Keeping a record of students progress after graduation is imperative to the measurement of education received. Although an almost impossible task in Peshawar, it is important that every effort be made to track students.

F - CONSOLIDATION OF CLASSES

It is believed that consolidation of classes would be of great benefit. Each trades class has it's own English class, eight in all including a class for the advanced students. This same occurrence takes place in mathematics. To the best of my knowledge there are seventy one students enrolled in six freshman English classes. Provided there is a limit of twenty four students per class, this could be reduced to three classes instead of the current six. The above mentioned students do not include nine in the advanced class and nineteen in the Master Mason class. Consolidation of these classes would further reduce the load by another four contact hours. This would be a reduction of sixteen contact hours in the consolidation of English classes alone, over half of an instructional load.

like Masonry and Carpentry are thought to be compatible in the areas of theory.
Eng. Qaseem was confronted with this issue and responded by saying that, it could be done and would improve the class content. Qaseem advised that in the freshman classes after the first quarter, theory becomes a repetition of instruction and students become bored and nonproductive. Plumbing, Steelwork and Welding would also be compatible for consolidation. Consolidation in these areas could further reduce the instructional work load an additional twenty four contact hours.

The consolidation of academic classes would provide room for improvement. Various levels of academic classes could be developed and students placed in corresponding levels according to their entrance examination. It would be possible for students to skip entire levels of academics according to their knowledge in a given area, thus further reducing the work load and providing the student an appropriate level of education.

From passed experience, an overload usually results in a reduction of teaching effectiveness. The author of this report strongly suggests that consolidation of classes be explored further and implemented. The area of consolidation academics in the Business classes has not been explored, but it should be considered when and if consolidation of classes is deemed worthy.

G - CLASS ROOM AND LABORATORY SPACE

Overcrowding has become a problem, Present classrooms are inadequate in size. Tools and equipment are also stored in the same area. Steps should be taken in considering expansion of the trades area. If expansion is found to be worthy, the design should include larger open areas that could serve more than one purpose. I would strongly suggest that before any plans for expansion are made that consolidation of classes be explored first to facilitate a better assessment of space.

H - CLASS AND LABORATORY MATERIALS

All practical instructors have complained of a shortage in materials for laboratory projects. Further the students have called for more materials for shop projects. A statement repeated over and over cannot be overlooked. Without planned and organized shop projects, it is impossible to build the motor skills necessary for the students success.

Instructors further complain of waiting periods from the time materials are ordered and the delivery of such materials. I strongly suggest that every effort be made in shortening the time it takes to receive materials.

A second area has proved to be a part of the materials problem. Sometimes, when ESSP needs something built, it is built from class materials by MTP students. This provides good practical work experience for the students but does consume some of the project

class materials in time for scheduled class projects. Scheduled class projects should be encouraged as they are planned for little material usage and the building of skills. It has always been a problem with vocational education in that projects are often set aside for the production of other things. Many do not understand that lesson plans are not just a class room tool. Steps listed on the next page may help in alleviating this problem.

1. ESSP and other organizations should supply materials for special projects, or order such projects allowing time for the delivery of materials and the preparation of lesson plans for the projects.
2. Staff involved in the billing an purchasing of such materials should be made aware of the problems at MTP.

3. Instructors should hand in material orders to the office every quarter, accompanied by the shop drawing of the project and material list for each project.
4. Management should make sure materials are ordered every quarter so the supply is maintained.
5. A budget should be allocated for such purposes and made known to management at MTP.

I - TOOLS AND EQUIPMENT

Tools and shop equipment are lacking. Some of the equipment purchased is of poor quality. Quality in tool purchasing should be of utmost importance. Money being a prime factor in this matter is understood, but the problem still exists.

With the assistance of MTP faculty and staff a list of tools to be presented to students at graduation have been drafted for each trade, and are included in appendix - B of this report. Tool lists included are thought to be complete, but have not been placed in an order of importance.

Safety equipment needs to be purchased for all trade areas. Students without safety glasses were observed participating in several tasks. Furthermore hard hats for the masonry class are needed. The electrical class needs some type of variable voltage regulator. Safety cannot be stressed enough.

J - WORDS ABOUT QUETTA

A trip to Quetta took place during the second week of my visit. Quetta now in the middle of the second quarter of classes and gave the author a contrasting view of the MTP program. The program was found to be running more efficiently than Peshawar. The mission of MTP is still alive and growing at Quetta. Instruction is enhanced by weekly meetings with instructors and management. A large part of this success could be attributed to these meetings and a suggestion box located outside the office door that is check daily. When asked about the suggestion box, Akram advised that at first there were many suggestions, now there are few.

issues have been directed at the Quetta center, although, it should be cautioned that all issues discussed should apply to all MTP centers. The author of this report found Quetta well organized and records located in one central location. Charts and graphs were displayed in the office showing student progress and problem areas. It should be noted that all was displayed in English, and easily understood. Akram deserves a strong gesture of congratulations in his efforts at Quetta.

During an interview with Akram the following needs surfaced. Quetta is lacking in communications with ESSP and the Peshawar branch. Problems were conveyed in receiving insurance benefits. Ordering of materials appears to be a duplication of the problem in Peshawar. A Dari typewriter is needed.

A need exists for a computer and printer in Quetta. A computer would enhance the efficiency of the program. Development of course work would be simplified and enhanced. Revisions and updates in curriculum could be made easily and with accuracy. It is my recommendation that Quetta be supplied with such equipment.

I would also recommend that twice a year MTP provide transportation for a meeting of the faculty from both locations. This would help bridge the gap in communication and allow the interaction needed. Both divisions have excellent ideas and these ideas should be shared. Consistency in the program depends on good communication between the various branches. Communication will become even more important as the program enters Afghanistan. A good communication level needs to be established.

The problem voiced on Insurance appears to be that the proper procedures are not followed. I would suggest that a handout listing the proper procedures to be followed, printed and distributed.

Akram was asked what MTP could do to help him and responded with only one request. He would like help to improve his English language capabilities. This statement was also made by Akram on my first visit two years ago.

PART V

A VISIT TO ATTC

A visit to the AFGHAN TECHNICAL TRAINING CENTER was scheduled to view the project and transmit useful information to ESSP officials. Although a short visit information gather is considered to be accurate.

Information presented below was gleamed from a short but productive interview with Ahmad Sheheb Aman, the director of the program. Paband of MTP Peshawar accompanied the author on this visit.

The program is divided into two major fields, Auto Mechanics and welding. As part of the auto mechanics section a course in automotive electrical is included. As part of the welding program a course in machine operation is included. Each of the programs presently have ten students enrolled in each area for a total of twenty students. Program length is one year.

The students selected are mostly illiterate. It should be noted however most of the students demonstrate established skills in their areas. To facilitate a literacy program one full time instructor and an assistant is employed. Curriculum and text books for the literacy course have been obtained through ESSP.

There are currently three full time instructors employed and three assistances, one instructor and assistant for each program area. Paband was supplied with course outlines and information in these areas.

Teaching materials seam to be adequate and are well organized.
Facilities consist of two rooms approx 20' by 30' and are well equipped.
Tools need to be counted and a needs list for tools developed.
Ahmad suggested the following equipment would be needed:

- Ducane projector (film strip projector).
- Photo copying machine
- Office and class room supplies
- Toyota and Hyina special tools
- Demonstration engines. (engines capable of running)
- Diesel ejector pump tester
- Dictionary English/Dari
- An approved method of material ordering
- Dari typewriter

In conclusion I was impressed to find the program had only been started in January of this year. From my observation Ahmad is a very capable manager and instructor.

I would recommend that the present structure conduct it's courses until students enrolled have had the opportunity to graduate. This would allow time for observation and better facilitate decisions as to changes to be made.

I would further recommend the placement of a guard at the facility as soon as it is acquired. It is rather wide open and concern was expressed as to a problems with books being stolen. The facility has a good inventory of equipment and should be protected.

A job placement program will be needed. I was advised that the truck farm had all the mechanics it needed. I was further advised that some type of in-service training must be supplied for the present mechanics employed at the truck farm. I would recommend that this be part of the present or adapted curriculum.

PART VI

PROJECT PROPOSALS

As a follow-up to the visitation, the following proposals are submitted to the appropriate officials for review. All of the projects covered in this proposal would be completed in Omaha NE, USA.

1 Work jointly with Milan Dady on the development of an cooperative program which will prepare students to join together in the operation of their own business. This design would include course descriptions, and broad outlines in the Construction Technology field.

2. Gathering of appropriate audiovisual and written resource aids. It is believed that these and other materials could be obtained as a donation from publishing and media outlets. A letter of introduction will be needed to facilitate the donation of these materials for Training Project.

I would like to extend any and all assistance possible through Metro Community College. The consultant may be contacted at any time through the college.

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PART VII

CONCLUSIONS

My first impression after arrival at the Manpower Training Center in Peshawar was one of amazement. The physical accomplishments were overwhelming. In just two years two complete training centers had been built and are in full operation. What had been a thought placed on paper has indeed become a reality. The dedication and admiration for the project demonstrated by instructors illustrates the foundation for its success.

Most organizations go through the institutionalization stage which MTP now faces. It is believed that the infrastructure of the program is strong. In interviews with instructors, both formal and informal, I was expressed that all are proud to be working for MTP. This, in itself demonstrates the desire to work together and continue with the tasks ahead. It is in my opinion that MTP will continue to make the improvements necessary to meet the needs in education for Afghanistan.

During my stay an unusual quality has been observed in the staff and management of ESSP, something that is rarely observed any longer. There is compassion in MTP for it's employees and affiliates. This joined with the intense dedication observed guarantees Afghanistan the second chance it so well deserves.

APPENDIX - A

EVALUATION RESULTS

LISTED BY SUBJECT AND AVERAGE

Advanced English	3.49
Carpentry English	2.81
Electricity English	3.97
Masonry English	3.74
Master Mason English	2.83
Plumbing English	3.81
Steelwork English	3.86
Welding English	4.40
	Average=3.61

Master Mason Jobsite Master	4.00
MasterMason Map Reading Advanced	4.36
Drawing Advanced	3.92
	Average=4.09

Carpentry Math	3.50
Electricity Math	3.87
Masonry Math	3.86
Masonry Math	3.21
Mathematics Algebra	3.50
Plumbing Math	3.7
Steelwork Math	4.38
Welding Math	3.90
	Average=3.74

EVALUATION RESULTS

LISTED BY SUBJECT AND AVERAGE

Carpentry Practical Advanced	3.60
Carpentry Practical	3.66
Electricity Practical	3.61
Electricity Practical Advanced	4.39
Masonry Practical	3.27
Masonry Practical Advanced	4.26
Plumbing Practical Advanced	4.56
Plumbing Practical	3.21
Steelwork Practical	4.88
Steelwork Practical Advanced	4.26
Welding Practical	4.44
	Average=4.01
Intro Technology Advanced	3.94
	Average=3.94
Intro Technology Theory	3.86
Carpentry Theory	4.64
Electrical Theory	4.26
Masonry Theory	3.55
Master Mason Theory	3.52
Plumbing Theory	4.26
Steelwork Theory	3.88
Welding Theory	4.15
	Average=4.01

EVALUATION RESULTS

LISTED BY SUBJECT AND AVERAGE

Carpentry Theory Advanced	4.64
Electricity Theory Advanced	4.21
Electricity Theory	3.94
Masonry Theory	3.50
Plumbing Theory	4.54
Plumbing Theory	4.63
Steelwork Theory	3.95
Steelwork Theory	4.25
Welding Theory	4.81
Welding Theory Advanced	3.33
Welding Theory Advanced	2.34
Carpentry Theory	3.64
	Average=3.97

EVALUATION RESULTS

LISTED BY CLASS AND AVERAGE

Advanced English	3.49
Carpentry English	2.81
Electricity English	3.97
Masonry English	3.74
MasterMason English	2.83
Plumbing English	3.81
Steelwork English	3.86
Welding English	4.40
	Average=3.61

MasterMason Jobsite Master	4.00
MasterMason Map Reading Advanced	4.33
Drawing Advanced	3.92
	Average=4.09

Carpentry Math	3.50
Electricity Math	3.87
Masonry Math	3.86
Masonry Math	3.21
Mathematics Algebra	3.50
Plumbing Math	3.70
Steelwork Math	4.38
Welding Math	3.90
	Average=3.74

EVALUATION RESULTS

LISTED BY CLASS AND AVERAGE

Carpentry Practical Advanced	3.60
Carpentry Practical	3.66
Electricity Practical	3.61
Electricity Practical Advanced	4.39
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Masonry Practical Advanced	4.26
Plumbing Practical Advanced	4.56
Plumbing Practical	3.21
Steelwork Practical	4.88
Steelwork Practical Advanced	4.26
Welding Practical	4.44
	Average=4.01
Intro Technology Advanced	3.94
	Average=3.94
Intro Technology Theory	3.8
Carpentry Theory	4.64
Electrical Theory	4.26
Masonry Theory	3.55
MasterMason Theory	3.52
Plumbing Theory	4.26
Steelwork Theory	3.88
Welding Theory	4.15
	Average=4.01

EVALUATION RESULTS

LISTED BY CLASS AND AVERAGE

Carpentry Theory Advanced	4.64
Electricity Theory Advanced	4.21
Electricity Theory	3.94
Masonry Theory	3.50
Plumbing Theory	4.54
Plumbing Theory	4.63
Steelwork Theory	3.95
Steelwork Theory	4.25
Welding Theory	4.81
Welding Theory Advanced	3.33
Welding Theory Advanced	2.34
Carpentry Theory	3.64
	Average=3.97

LISTED BY AVERAGE

BELOW COLLEGE AVERAGE

Welding/Theory/Advanced	2.34
Carpentry/English	2.81
Master Mason/English	2.83
Plumbing/Practical	3.21
Masonry/Mathematics	3.21
Masonry/Practical	3.27
Welding/Theory/Advanced	3.33
Advanced/English	3.49
Carpentry/Math	3.50
Masonry/Theory	3.50
Mathematics/Algebra	3.50
Master/Mason/Theory	3.52
Masonry/Theory	3.55
Carpentry/Practical/Advanced	3.60
Electricity/Practical	3.61
Carpentry/Theory	3.64
Carpentry/Practical	3.66
Plumbing/Math	3.70
Masonry/English	3.74
Plumbing/English	3.81
Steelwork/English	3.86
Masonry/Math	3.86
Intro/Technology/Theory	3.86
Electricity/Math	3.87
Steelwork/Theory	3.88
Welding/Math	3.90
Drawing/Advanced	3.92
Intro/Technology/Advanced	3.94
Electricity/Theory	3.94
Steelwork/Theory	3.95
Electricity/English	3.97

LISTED BY AVERAGE

ABOVE COLLEGE AVERAGE

Master Mason/Jobsite Master	4.00
Welding/Theory	4.15
Electricity/Theory/Advanced	4.21
Steelwork/Theory	4.25
Electrical/Theory	4.26
Masonry/Practical/Advanced	4.26
Plumbing/Theory	4.26
Steelwork/Practical/Advanced	4.26
Master Mason/Map Reading/Advanced	4.36
Steelwork/Math	4.38
Electricity/Practical/Advanced	4.39
Welding/English	4.40
Welding/Practical	4.44
Plumbing/Theory	4.54
Plumbing/Practical/Advanced	4.56
Plumbing/Theory	4.63
Carpentry/Theory	4.64
Carpentry/Theory/Advanced	4.64
Welding/Theory	4.81
Steelwork/Practical	4.88

APPENDIX B

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

NEEDS LIST

Carpentry Shop

	Tool Description	Quantity
1	1/2" drive power drill	12
2	100′ or 50′ extension cords #12 wire	24
3	16 oz ripping hammers	24
4	16 oz curved claw hammers	24
5	Back saw	24
6	Belt sanders	12
7	Bit and Brace professional	12
8	Block Plane 8"	12
9	Bull nose rabbet planes	12
10	Chalk lines	24
11	Combination squares	24
12	Compass saw	24
13	Complete Auger bit set for Brace	12 sets
14	Coping saw	24
15	Cordless drills	24
16	Drill Press	3
17	Drill points for Handyman drill	12 sets
18	Finish vibrating sander	12
19	Framing squares	24
20	Hammer Drill	12
21	Hand stapler	12
22	Handyman push drill	12
23	Jack Planes	12
24	Jig saws	12
25	Jointer Planes #5	12
26	Jointer Planes #6	12
27	Jointer Planes #7	12
28	Key Hole saw	24
29	Leather Carpenter Utility Belts	24
30	Marking Gauge	24
31	Portable hand routers	12
32	Portable plunge routers	12
33	Portable power plane	12
34	Power Surfacing Planer	3
35	Power Jointer	3
36	Professional Miter Box Saws	12
37	Professional Block Plane	12
38	Quick release bench vise (carpenters)	24
39	Radial Arm saws	3
40	Receptacle power saw	12
41	Set of wood rasps	24

43	Set of Nail Sets	24
44	Set of spade bits	24
45	Set of hole saws	12
46	Sharper	3
47	Sliding T Bevel squares	24
48	Smoothing Planes #4	12
49	Smoothing Planes #3	12
50	Spoke and shave	12
51	T squares	24
52	Table circular saw	3
53	Wing dividers	24
54	Wood Lath & full set of cutters	3

MANPOWER TRAINING PROGRAM

STUDENT GRADUATION

Carpenter TOOL LIST

	Tool Description	Quantity
1	16 oz ripping hammer	1
2	16 oz curved claw hammer	1
3	Block plane	1
4	Bottle of chalk	1
5	Brace and Bit set	1
6	Bullnose rabbeting plane	1
7	Carpenters tool box	1
8	Chalk line	1
9	Combination square	1
10	Compass saw	1
11	Framing square	1
12	Hand saw ripping	1
13	Hand Jointer plane	1
14	Hand level 4′	1
15	Hand saw crosscut	1
16	Hand level 2′	1
17	Leather tool apron	1
18	Nail sets set of	1
19	Safety glasses	1
20	Sliding T bevel square	1
21	Smoothing plane	1
22	Steel self retracting tape 25′	1
23	Wing dividers	1
24	Wood rasps set of	1
25	Wood chisels set	1
26	Wooden folding rule	1

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

Masonry Shop NEEDS LIST

	Tool Description	Quantity
1	100ft string lines	100
2	2 lbs Malls	48
3	builders level	3
4	Bull floats and handles	12
5	Cloth gloves	300 pair
6	Cold chisel sets	48
7	Concrete vibrators	12
8	Concrete trowels	24
9	Dust masks	500 pieces
10	Framing squares	48
11	Hand tampers	24
12	Hand levels 4'	24
13	Hand levels 2'	24
14	Hard hats	48
15	Joint strikes	24
16	Mag trowels	24
17	Masons hammers	96
18	Mosaic and terrazzo floor girder polisher	6
19	Pick axes	12
20	Plumb bobs	48
21	Power tampers	6
22	Rubber boots	50 pair
23	Safety glasses	100 pair
24	Transit	3

MANPOWER TRAINING PROGRAM

STUDENT GRADUATION

TOOL LIST

Masonry

	Tool Description	Quantity
1	100 ft. string line	2
2	2 lbs Mall	1
3	Cloth gloves	12 pair
4	Concrete trowels	1
5	Dust masks	50
6	Framing squares	1
7	Hand level 2'	1
8	Hand level 4'	1
9	Hand tamper	1
10	Joint strikes	1
11	Masons hammer	1
12	Plumb bob	1
13	Rubber boots	1 pair
14	Safety glasses	1 pair
15	Set of cold chisels	1

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

Steelwork Shop NEEDS LIST

	Tool Description	Quantity
1	1/2" hand power drills	12
2	2 lbs Malls	24
3	Ballpeen hammers #6	48
4	Ballpeen hammers #8	48
5	Ballpeen hammers #4	48
6	Belverly Shears	12
7	Bolt cutters	24
8	Braker Shears	6
9	Dent Pullers	24
10	Diagonal cutting pliers	48
11	Dividers	48
12	Drill press and vise	6
13	End nippers Lathing pliers	48
14	Full face shields	24
15	Hand seamers	24
16	Leather aprons	24
17	Leather gloves	100 pair
18	Metal scribes	96
19	Metal Brake	3
20	Milwaukee stakes	12
21	Power shears	12
22	Power nippers	12
23	Roll forming machine	6
24	Roper Whitney Benders	3
25	Safety glasses	100 pair
26	Side cutting pliers	48
27	Tin snips	48

MANPOWER TRAINING PROGRAM

STUDENT GRADUATION

Steelwork TOOL LIST

	Tool Description	Quantity
1	2 lbs Mall	1
2	Ballpeen hammer #8	1
3	Ballpeen hammer #6	1
4	Ballpeen hammer #4	1
5	Bolt cutters 12"	1
6	Dent puller	1
7	Diagonal cutting pliers	1
8	Dividers	1
9	End nipper Lathing pliers	1
10	Full face shield	1
11	Hand seamers	1
12	Leather gloves	1 pair
13	Metal scribes	1
14	Safety glasses	1
15	Side cutting pliers	1
16	Tin snips	1

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

Welding Shop NEEDS LIST

Tool Description	Quantity
1/2" Hand power drills	12
100' #10 wire extension cords	24
Air compressors gas powered if available	6
Angle Grinders	12
Assorted hacksaw blades 10 & 12"	100 dozen
Bench vises	24
Bench grinder	12
Block and tackle	24
Bolt cutters	48
brazing rod	200 lbs
Chain hoist	6
Diagonal cutting pliers	48
Divider/Calipers 6"	24
Full face shields	48
Gas cutting and welding sets	12
Hacksaws and blades	24
Hearing protectors	48
Heavy duty electric welders	12
Heavy duty welding gloves	100 pair
High speed cobalt drill sets	24
Leather welding jackets	24
Metric dial calipers	24
Power hacksaw	6
Racheting screwdrivers with bits	24
Rubber mallets	24
Saber saw and metal cutting blades	12
Safety glasses	100 pair
Side cutting pliers	48
Strikers	48
Swiss needle file	24
Tie wire	200 lbs
Vise grips sheet metal type	24
Vise grips welding type	24
Vise grips C clap type	24
Welders helmets	24
Welding rods various types	200 lbs
Welding boots various sizes	48
Wire feed welders	12

MANPOWER TRAINING PROGRAM

STUDENT GRADUATION

Welding TOOL LIST

	Tool Description	Quantity
1	Bolt cutters	1
2	Diagonal cutters	1
3	Divider/calipers 6"	1
4	Full set of screwdrivers	1
5	Full set of hand files	1
6	Full set of twist drill bits	2
7	Hacksaw and blades	1
8	Hacksaw Blades	50
9	Hearing protectors	1
10	Leather welding jacket	1
11	Pair of leather work boots	1
12	Rubber mallet	1
13	Safety glasses	1
14	Side cutting pliers	1
15	Welders helmet	1

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

Electrical Shop NEEDS LIST

	Tool Description	Quantity
1	100' extension cords #14 wire	12
2	Ammeters 10-50amp or more	48
3	Automatic wire stripper/cutter 7 1/4"	48
4	Battery Eliminator	12
5	Carbon type resistors 100ohm-10mohm 1w 2w 5w 10w	100 sets
6	Coaxial cable strip/crimp tool 8"	48
7	Decade box 100ohms-10kohms 2amp-10amp	24
8	Educational work stations	30
9	Electricians leather work belt	48
10	Electricians hole saw set	12
11	Fuse pullers with safe T-grip	24
12	High voltage prob	12
13	Laboratory power supplies	48
14	Lineman's pliers	48
15	Mobile equipment power supplies	48
16	Multimeters	48
17	Rohstate (variable) 100-10kohm 100w 200w 500w	12 sets
18	Solder-less terminal service kits	24
19	Soldering Irons	48
20	Soldering Guns	48
21	Substitution boxes for resistance	24
22	Terminal crimping pliers/cutter 10 1/4"	48
23	Terminal crimping pliers/cutter 9 7/8"	48
24	Test lead wires	48
25	Utility knifes	48
26	Volt meter	48
27	Voltage regulator input v220 output v 0-220	6
28	Wire connectors sets	24
29	Wire strippers 6"	48
30	Wire strippers/bolt cutters 9 1/2"	48
31	Wire strippers/bolt cutters 10 1/4"	48

MANPOWER TRAINING PROGRAM

STUDENT GRADUATION

Electrician TOOL LIST

	Tool Description	Quantity
1	Ammeter 10-50 amp	1
2	Electricians leather tool belt	1
3	Fuse pullers with safety grips	1
4	Lineman pliers	1
5	Metal self retracting tape 25'	1
6	Multimeter	1
7	Rubber boots	1
8	Safety glasses	1
9	Set of screw drivers	1
10	Soldering iron	1
11	Soldering gun	1
12	Terminal crimping pliers	1
13	Tool box and lock	1
14	Utility knife	1
15	Wire strippers/bolts cutters	1

MANPOWER TRAINING PROGRAM

TOOLS AND EQUIPMENT

Plumbing Shop NEEDS LIST

	Tool Description	Quantity
1	6" plumbers levels	48
2	Basin wrenches	24
3	Bench grinders	12
4	Carbon steel dies	24 sets
5	Chain wrenches	96
6	Channel lock pliers	48
7	Crowfoot Wrenches	24 sets
8	Cutting oil catch basins	3
9	Folding wooden rules	48
10	Full Face shields	24
11	Hacksaw blades metal cutting	200 blades
12	Hacksaws	24
13	Large vise grips	48
14	Leather gloves	100 pairs
15	Pipe wrenches 6"-24"	24 sets
16	Pipe reamers sets	24
17	Pipe threaders and dies	24
18	Plum bobs	48
19	Power pipe threading machine	3
20	Power bayonet saw	12
21	Power hacksaw	6
22	Safety glasses	100 pairs
23	Socket sets 6mm-18mm	24 sets
24	Tap sets 54pc Metric and Hex	24
25	Tape measures	48
26	Wire wheels for bench grinders	48

Plumber TOOL LIST

	Tool Description	Quantity
1	Basin wrench	1
2	Chain wrench	1
3	Channel lock pliers	1
4	Folding wooden rule	1
5	Hacksaw and blades	1
6	Hand level 2′	1
7	Large vise grips	1
8	Leather gloves	1
9	Pipe wrench 12"	2
10	Pipe threader and dies	1 set
11	Plum bob	1
12	Plumbers level 6"	1
13	Safety glasses	1
14	Self retracting steel tape measure 25′	1
15	Socket set 6mm-18mm	1

APPENDIX - C

MANPOWER TRAINING CENTER

STUDENT EVALUATION OF INSTRUCTION

YOUR ANSWER TO THESE QUESTIONS
CAN HELP IMPROVE INSTRUCTION

INSTRUCTIONS:

1. Please answer all questions by placing an X over the appropriate number.
2. Written comments can be placed on the back of this sheet.
3. Show how you feel about your instructor by placing an X over the number that most nearly applies.
4. The rating scale ranges from 1=Poor 5=Excellent.

INSTRUCTOR'S NAME: _____

COURSE: _____

_____

_____

PART A: PLEASE ANSWER ALL THE FOLLOWING QUESTIONS ABOUT YOU INSTRUCTOR	Poor---------Excellent
1. Is well prepared for each class	1 2 3 4 5
2. Shows respect for students	1 2 3 4 5
3. Welcomes and responds to questions, comments and viewpoints	1 2 3 4 5
4. Motivates student interest in subject	1 2 3 4 5
5. Is willing to help students outside of class time if they request it	1 2 3 4 5
6. Is enthusiastic about teaching the subject	1 2 3 4 5
7. Uses methods that help students learn	1 2 3 4 5
8. Encourages the students participation and discussion in class	1 2 3 4 5
9. Has a clear understanding of subject matter	1 2 3 4 5
10. Makes the subject matter clear	1 2 3 4 5
11. Uses examples and/or real life situations to explain the material	1 2 3 4 5
12. Gives tests and/or assignments based on material taught in class	1 2 3 4 5
13. Starts class on time	1 2 3 4 5
14. Returns tests and/or assignments promptly	1 2 3 4 5
15. Ends class on time	1 2 3 4 5
16. Gives help to students when they need help	1 2 3 4 5
17. Fives fair and reasonable tests and/or assignments	1 2 3 4 5
18. Helps students to develop thinking and/or creative abilities	1 2 3 4 5
19. Talks so students can understand	1 2 3 4 5
20. Textbooks and/or reading materials seem appropriate for this class	1 2 3 4 5
21. Classroom or laboratory experiences are helpful to learning	1 2 3 4 5
23. Would you recommend this instructor to other students	1 2 3 4 5

PART B: WRITTEN COMMENTS MAY BE PLACED ON THE BACK